

M/40051-^{US} DE 19731764 = EP 893,117

<p>99-155605/14 A96 D21 (A14) BADI 97.07.24 BASF AG *EP 893117-A2 97.07.24 97DE-1031764 (99.01.27) A61K 7/06 Conditioner used in hair cosmetics, especially shampoo - is crosslinked and quaternised polymer based on a cationic or quaternisable monomer, and gives effective results without build-up effect (Ger) C99-046002 R(AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI) Addnl. Data: DIEING R, HOESSEL P, KOTTRADE S, SANNER A, ZEITZ K, RAUBENHEIMER H, SCHELMANN V 98.07.08 98EP-112651</p>	<p>A(4-D8, 12-V4A) D(8-B4)</p> <p>USE Polymers (I) are used as conditioners in hair cosmetics, especially shampoos (all claimed).</p> <p>ADVANTAGE Polymers (I) are more effective than usual cationic polymers and the corresponding non-crosslinked polymers, and do not cause a 'build-up' effect.</p> <p>ORGANIC CHEMISTRY Composition: The shampoo generally contains 0.01-5, especially 0.05-2 wt.% (I).</p> <p>POLYMERS Preferred Monomer: Monomer (a) is an N-vinylimidazole (derivative) of formula:</p>
<p>NOVELTY Conditioners used in formulations for hair cosmetics are polymers (I) obtained by: (1) free-radical polymerisation of (a) 1-99.99 wt.% cationic or quaternisable monomer; (b) 0-98.99 wt.% water-soluble monomer; (c) 0-50 wt.% another comonomer; and (d) 0.01-10 wt.% di- or polyfunctional comonomer; and (2) quaternisation, if monomer (a) is not quaternised.</p>	<p>EP 893117-A+</p>

<div data-bbox="305 835 544 1033" data-label="Chemical-Block"> <p>(II)</p> </div> <p>R¹⁻³ = hydrogen, 1-4 carbon alkyl or phenyl. Preparation: (I) can be prepared e.g. by solution, (inverse) emulsion, (inverse) suspension or precipitation polymerisation, usually at 20-130°C and normal or autogenous pressure, with the conventional free radical initiators.</p> <p>EXAMPLE 10% of a feed (I), consisting of N-vinylpyrrolidone (270 g) and N,N'-divinylethylurea (0.6 g), was added to water (400 g) and 65%</p>	<p>dimethyl-diallyl-ammonium chloride solution (46 g), then heated to 60°C under a nitrogen stream, with stirring. The remaining feed (I) was added in 3 hours, whilst feed (2), comprising 2,2'-azo-bis(2-amidinopropane) dihydrochloride (III) (0.9 g) in water, (100 g) was added in 4 hours. After 3 hours, the mixture was diluted with water (700 g) and stirred for 1 hour, then (III) (1.5 g) in water (30 g) were added and stirring continued for 2 hours at 60°C, to give a colourless, highly viscous polymer solution (A) with a solids content of 20.9% and K value of 80.3.</p> <p>Standard shampoo containing 10.0% sodium lauryl ether sulfate, 4.0% coco amidopropyl betaine and water to 100%, were treated with 0.1/0.5% of either the polymer (A) or polyquaternium-16 (B) as control. The reduction in combing force compared with the standard was (A) 47/57%, (B) 0/19% on wet hair, and the lather formed was (A) very creamy, (B) weak. (KB). (12pp0016DwgNo.0/0)</p> <p>EP 893117-A</p>
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